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ABSTRACT

The Adolescent Coping Scale (E. Frydenberg and R. Lewis, 1993) (ACS), developed in the Australian context, has been used widely since 1993 as an instrument to measure coping. Studies to date have published data highlighting the relationship between variables such as age, ethnicity, gender, attitudes and achievement, and coping. In doing so, they have established how particular populations of young people cope. This paper examines the construct validity of the ACS and reports investigations establishing the relationship between positive self-perceptions, achievement, dysfunctional behavior, and coping. These studies are reviewed as providing support for the validity of the instrument and demonstrating the necessity of using both fine-grained and more global measures in the assessment of coping. In addition, the studies collectively extend our understanding of the construct of coping. (Contains 2 figures and 44 references.) (Author/SLD)

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The Adolescent Coping Scale: Construct validity and what the instrument tells us.

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Abstract

The Adolescent Coping Scale (Frydenberg & Lewis, 1993), developed in the Australian context and has been used widely since 1993 as an instrument to measure coping. Studies to date have published data highlighting the relationship between variables such as age, ethnicity, gender, attitudes and achievement, and coping. In doing so they have established how particular populations of young people cope. This paper examines the construct validity of the ACS and reports investigations establishing the relationship between positive self-perceptions, achievement, dysfunctional behaviour and coping. These findings are presented as providing support for the validity of the instrument, and demonstrate the necessity for utilising both fine grained and more global measures in the assessment of coping. In addition, the studies, collectively extend our understanding of the contruct of coping.

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Coping is what one does to manage stress: it comprises the cognitive and behavioural strategies that are used to deal with the demands of everyday living. Thoughts, feelings and actions make up the coping strategies that are called upon to varying extents in particular circumstances to manage concerns (Frydenberg, 1997).

Much of the early measurement of coping has been from an adult-centric orientation (e.g. Folkman, 1982; Folkman & Lazarus, 1985; Lazarus & Folkman, 1984; Sidle, Moos, Adams, & Cady, 1969; Stone & Neale, 1984). However, in recent years there have been attempts to assess adolescent coping and to develop instruments that more accurately reflect adolescent coping behaviour (e.g. Compas, 1987; Dise-Lewis, 1988; Patterson & McCubbin, 1987; Spirito, Stark & Williams; 1988; Fanshawe & Burnett, 1991). A diverse range of these instruments has been developed. What they have in common is that they require respondents to indicate how they deal with, or would in hypothetical situations deal with, stressful situations.

There is some confusion in the terminology that is frequently adopted with regard to coping. Coping actions (e.g., what an individual feels, thinks or does) are often grouped into coping strategies. For example, a related number of actions such as 'worry about what will happen' and 'worry about what I have done' will be argued to comprise a strategy called 'Worry'. The number of strategies measured varies from two or three broad conceptual groupings (Folkman & Lazarus, 1985; Seiffge-Krenke & Shulman, 1990) through to a range of eight or ten specific strategies (Spirito et al., 1988; Wills, 1986). Strategies are in turn grouped, according to associated usage, into coping styles (e.g., a group of strategies that represent conceptually similar actions). For example, the strategies 'talk with friends', 'ask a professional for help' and 'come to meetings' might comprise a style called "Refer to Others'. However, sometimes coping actions and coping strategies are used interchangeably, while coping styles generally refer to the actions or strategies that are used consistently by an individual to manage stress. Other associated terms used include coping tactics and coping resources. These two terms appear to be used interchangeably with coping strategies (Schwarzer & Schwarzer, 1996).

Coping resources operate to affect the coping situation (e.g., type of strategy adopted, range of responses considered, interpretation of the event or effort expended on coping). Coping resources seem to be akin to a trait construct or general coping.

This paper reports on a recently published measure of adolescent coping, namely the Adolescent Coping Scale (ACS) (Frydenberg & Lewis, 1993). In particular, it is intended to demonstrate the construct validity of this measure by reference to reported studies which have used the instrument.

In general a test is valid in the sense that it measures what it purports to measure (Best, 1997). One way construct validity is empirically assessed is by examining the extent to which scores on a test are empirically associated with a theoretically related construct. For example, it may be hypothesised that those adolescents who are at risk of exclusion from school would use more non-productive coping strategies and fewer productive ones. The ACS has been developed in the Australian context and has been used widely since 1993 as an instrument to measure adolescent coping. Studies to date have demonstrated its utility, and established how particular populations of young people cope (Frydenberg, 1997). The relationships between age, ethnicity and gender, and coping have been frequently reported (Frydenberg & Lewis, 1993). This paper examines the construct validity of the scale and reports investigations which examine the relationships between self-perceptions, achievement, dysfunctional behaviour, and patterns of coping. The findings are presented in support of the validity of the instrument and are used to demonstrate the necessity of employing fine grained measures in the assessment of coping. Finally, the studies collectively extend our understanding of the contruct of coping.

In summary, therefore, the purpose of this paper is to examine the reported empirical relationships between the measures of coping provided by the ACS and theoretically related characteristics. The view adopted is a positivist one which examines correlations and other statistical indicators of association between indices of self perception and various forms of dysfunction, and coping scale scores.

Methods Techniques or Modes of Inquiry

When Australian adolescents are asked to describe the ways in which they cope they generally nominate no more than three responses (Frydenberg & Lewis, 1993). Nevertheless, a composite picture of adolescent coping in Australia has been developed from thousands of responses which have been collected from young people when they were asked to describe how they had coped in particular circumstances. Descriptions of 2014 coping actions provided the basis of the development of the Adolescent Coping Scale (Frydenberg & Lewis, 1993), which is an 80-item checklist that identifies 18 coping strategies commonly used by adolescents. Since there is an advantage in knowing how people cope with particular concerns as well as with their concerns in general (Frydenberg & Lewis, 1994), and since much of an individual's coping behaviour is situation-specific there is a *Specific Form* of the ACS, which allows for the measurement of responses to a particular self-nominated (or administrator-nominated) concern and a *General Form* that determines how a young person copes in general. This is the *Long Form* of the instrument. To create the *Short Form* of the instrument 18 items were selected from the 79 closed response items on the ACS. Each item was selected on the basis of two criteria. First, its wording appeared to assess, as comprehensively as possible, one of the respective 18 dimensions of coping included on the ACS. Second, each item's relationship with the remainder of the items comprising the scale of which it was a part was substantial enough to justify its independent use as an indicator of its respective coping dimension. In total, the Short Form of the ACS comprises 19 items, the last of which asks students to write

down any things that they do to cope other than those things described in the preceding 18 items. The reliability of both the Long Form and the Short Form of the instrument has been established through replication of the initial standardisation data and has been reported elsewhere (see Frydenberg & Lewis, 1996).

Insert Figure 1

Each of the 18 scales reflects a different coping strategy and contains between 3 and 5 items. Each item describes a specific coping action, apart from the last item, which asks students to write down any things they do to cope other than those things described in the preceding 79 items. Respondents indicate if the coping activity described is "used a great deal", "often", "sometimes", "very little" or" doesn't apply or don't do it", by circling the numbers (5),(4),(3),(2), or (1) respectively. The mean magnitude of statistical indicators of consistency and reliability for the scales is .70 and .68 respectively. The strategies have been represented as three coping styles, each comprising between four and eight scales. The first of these, Reference to Others, is characterised by turning to peers, professionals or deities. The second, Non-productive Coping, comprises strategies such as Self-blame and Tension Reduction. These are empirically associated with an inability to cope. The final style is a Productive Coping one which is characterised by strategies that relate to solving the problem while remaining optimistic, fit, relaxed and socially connected. The ACS has been used as the central indicator of coping in each of the studies reported in this paper.

Insert Figure 2

Data or sources of evidence

As stated above, in order to demonstrate the construct validity of the ACS, a series of studies are examined which report the association between coping responses and measures of either self-perception, achievement or dysfunctional behaviour. The findings from these studies are summarised in Table 1.

Insert Table 1

<u>Self-perception</u>

A study by Neil (1996) of self-perception and coping, involved 63 Australian and 63 South-East Asian secondary students (62 males and 64 females, aged 15-21) who competed the General Long Form of the ACS and the Rosenberg self esteem scale (Rosenberg, 1989). The results were analysed with a 3 Way-Manova using gender, ethnicity and self-esteem as predictors of coping styles. The results indicate that South East Asian students use more Reference to Others compared to Australian students, and that nationality accounted for 13 percent of the variance of their coping style. Further analysis of coping strategies showed that respectively 32%, 27% and 23% of the variance ($p<.001$) in respondents' usage of Social Action, Seeking Professional Help and Seeking Spiritual Support was also associated with nationality. In each case South-East Asian students reported greater usage of the strategies.

Low self-esteem was signifcantly associated with Non Productive coping, with 17% of the variance in Non-productive coping related to self-esteem. Not Cope, Worry, Self-blame, and Keep to Self were each significantly associated with nationality, which predicted at least 10% of the variance of each of these respective strategies. In all cases low self-esteem predicted greater usage of these non-productive strategies. No significant interactions or gender effects were reported.

Secondly, 162 final year high school students students (116 females and 46 males) completed the Specific Short form of the Adolescent Coping Scale, the Self Description Questionnaire (SDQ 111, Marsh,1994), and the Perceived Stress Scale (PSS, Australian Catholic University, 1996). Administration was one week prior to the submission of a required Common Assessment Task (CAT)[1]. The investigation focused on the relationship between academic self-concept, perceived stress, and coping styles used by high school students in their final year of schooling (Stevenson, 1996). It was found that higher use of problem solving coping was associated with lower perceived stress (categorised into quartiles). Higher Non-productive coping was associated with both higher perceived stress and lower academic self concept. Females used more Reference to Others and more Non-productive coping than males, but the use of Solving the Problem was not different for boys and girls.

Finally one study examined the relationship between coping and self-efficacy. Jenkin (1997) surveyed 135 Year 8 students (81 male and 54 female) who were participants in a school initiated Outward Bound (rugged outdoor camping) program. The instruments used were the Specific Long Form of the ACS, a Self-efficacy scale (Shever et al., 1982), and a Physical Self-Efficacy measure (Rychman, Robins, Thornton, & Cantrell, 1982). A discriminant function analysis found that the best predictors for distinguishing between high and low self-efficacy were the coping strategies Focus on the Positive, Focus on Solving the Problem and Work Hard to Achieve. A combination of these strategies accurately predicted low or high self-efficacy (top and bottom quartiles) for 70% of the sample. Whereas 77% of those in the bottom quartile of efficacy could be correctly identified by their lesser

[1]During their final year of schooling the students complete three to four CATS per subject, which in total determine their ranking for tertiary entry.

usage of these strategies, prediction of those in the high efficacy group was less successful (65%). Therefore, although a relative absence of these productive strategies is predictive of self-perceived inability to cope, students scoring higher on self-efficacy are not necessarily those who employ more of these strategies.

Although a number of Outward Bound instructors predicted that, as a result of their program, there would be a possible increase in six student coping strategies, namely, Physical Recreation, Social Action, Social Support and Friends, Work Hard to Achieve, Focus on the Positive and Solving the Problem, only half of these showed an increase. Nevertheless the fact that the instructors identified these strategies provides a measure of construct validity for each.

Achievement

Two studies looked at the relationship between achievement and coping. In the first (Parsons, Frydenberg & Poole, 1996), 'capable' boys were compared with the regular student body of males using 374 boys in Grades 9, 10 and 11 at an independent boys' school in Melbourne. Capable students were less likely, than those less capable, to declare that they did not have the strategies to cope. It was also found that boys who achieved better than would be expected on the basis of ability alone ('over achievement'), utilised more Social Support as a strategy for coping than did their peers.

Secondly, in a study by Noto (1995), a sample of 90 female adolescent students (Years 9, 10 and 11) completed the Adolescent Coping Scale (ACS) and the data were compared to the 374 boys included in the Parsons et al. (1996) study. IQ was measured by using the ACER Higher Test (ML/MQ), a pencil and paper group test of intelligence with two forms. A combined L and Q score was recorded for each person. Academic achievement scores were based on an average of all final year results from the previous year. When measuring the relationship between coping and achievement, Noto controlled for gender and IQ by using partial correlations. When the relationship between coping and academic achievement was investigated, significant positive correlations were reported for the problem focused strategies, Work Hard and Achieve, Focus on Solving the Problem, Seek Social Support and Focus on the Positive. Significant negative correlations were reported for three non-productive strategies. These were, Not Cope, Tension Reduction and Ignoring the Problem. It was also found that high usage of the strategy Invest in Close Friends was negatively associated with achievement.

Dysfunction

In addition to studies of self-perception, achievement and coping, there is an accumulating body of evidence that supports the construct validity of the ACS by highlighting the finding that various forms of behaviour which could be characterised as dysfunctional are associated with a greater use of non productive coping responses, or a lesser use of productive ones.

Firstly, 30 learning disabled students (aged 13 to 15 years, $\underline{M}$ = 13.5 years, $\underline{SD}$=0.63) completed the Long Form of the ACS. Their coping responses were

compared to a group of average or high achieving non learning disabled students, matched in age, gender and ethnicity (Cheshire, 1996). The matched design of the study effectively controlled for differences in coping strategies for gender, ethnicity and age. A MANOVA analysis found that the learning disabled group used more Wishful Thinking and believing that they were Not Coping than the average achieving adolescents. Further, productive strategies such as Focusing on the Positive, Relaxing and Working to Solve the Problem were used less by the learning disabled group. Overall, learning disabled students used significantly less of a coping style that focused on the problem than did their average achieving peers. The remaining styles which reflected Reference to Others and Non-Productive Coping showed no significant differences between the two groups.

Secondly, the coping strategies of eight students (6 male and 2 female) attending a special setting for behaviourally disordered post-primary students were compared to the coping strategies used by 24 peers (8 male and 16 female) drawn from Year 8 classes in two mainstream settings. To assess their coping the General Long Form of the ACS was employed (McTaggart, 1996). The students in the specific setting, were attending a Teaching Unit and were considered to be at risk of exclusion from high School since they had been suspended for more than 10 days within the previous six months or the current school year.

Students in the two settings differed significantly in their use of the strategies Work, Solve the Problem, Keep to Self, Social Support, Seek Professional Help and Relax. The main effect for Work by school group membership is most evident.. Analyses for coping styles by school indicated effective coping (Solving the Problem) is significantly associated with school-type where as there were no significant differences main effects in mean scores for Reference to Others and Non-productive Coping .

Membership of the mainstream groups is associated with greater use of Solve the Problem, which in conjunction with more use of Work Hard, represents a powerful combination of approach (solution focused) coping. Strategies more closely associated with membership of the Teaching Unit Group were Keep to Self, Professional Help and Social Action. These data indicate that membership of the mainstream is clearly associated with the use of effective, problem-focused coping strategies. However, differences between groups in Non-productive coping were not as apparent as was expected, and the small sample size limits the confidence that can be placed in the results

In a third study which examined the relationship between adolescent self-reported coping, teacher evaluations, and depression, 94 Year 9 students (40 males and 54 females with an average age of 14.5 years) at a Secondary School in outer Metropolitan Melbourne (Cunningham, 1997) were administered the General Short Form of the ACS and the Children's Depression Inventory (Kovacs, 1992). Each of the 47 participating teachers completed a 10 item teacher depression rating scale, derived from the Childrens Depression Scale (Lang & Tisher, 1983), on two of the participating students.

A hierarchical regression analysis was used to determine to what extent teachers' perceptions of depression and self-reported coping strategies predict self-reported depression. It was found that the Non-productive coping style of the ACS was capable of predicting an additional 38% of the variance in depression scores above teacher ratings alone. The inclusion of an active coping style comprising the strategies Solve the Problem, Seeking Social Support, Physical Recreation, Relaxation and Focus on the Positive contributed a further 12%. While the three predictor variables accounted for 60% of the variance in depression scores, only Non-productive and active coping styles remained significant predictors when all three variables were included.

Discriminant function analysis was used to predict two levels of depression, using the dichotomy high-risk or low-risk. A variate associated with more non-productive coping and less active coping, combined with teacher ratings, accurately categorised 89% of adolescents as either high risk or low risk. The results were cross-validated on an independent sample and support a strong positive relationship between self-reported depression and non-productive or avoidance coping style, and a negative association with an active or problem-focussed coping style. Thus the less one was actively and positively engaged in activities (a measure of depression being the absence of postive affect), the more one used non-productive or avoidance coping strategies, and the less one used adaptive coping strategies. Furthermore, non-productive coping was associated more strongly with the depressive measure than was active coping, while the converse held for the positive depression measure.

The fourth study of 50 adolescents (35 males and 15 female with an average age of 14 years), reports an investigation of participants in a brief intervention program for young people with emotional, behavioural, social and or psychotic difficulties (Poot, 1997). Measures used were the Youth Self-Report Scale (Achenbach,1988), the ACS (Frydenberg & Lewis, 1993), the Beck Depression Inventory (Beck & Steer, 1987) and a Self-Esteem scale (Coopersmith, 1967). The analysis produced a two-factor orthogonal factor solution on 24 young people who provided complete data on the four measures. The factor analysis accounted for 80.2% of the variance. Poot identified a factor she termed Dysfunction which accounted for 50 percent of the variance of the four measures. Dysfunction was characterised by more reported problems, lower self-concept, greater depression and the ACS coping style labelled Non-productive coping. The loadings of the other ACS styles, Reference to Others and Solving the Problem, on this factor were .04 and .06. The second factor, which Poot called Productive Coping had only two significant loadings, the two ACS coping styles Reference to Others and Solving the Problem. None of the other aforementioned measures loaded significantly on this factor.

Finally, two studies focused on less severe forms of dysfunction. The first investigated homesickness (Szczepanski, 1995) and the second sampled 25 gifted young people selected for an accelerated high school program (Davies, 1995). In the

first study (Szczepanski, 1995) 77 female boarding school students aged 12 to 18 years (in grades 7 to 12) completed three instruments. Twenty-four of the students were in their first year of boardng and 53 were in their second, third and fourth years. The students were attending a middle-sized independent girls' secondary school located in metropolitan Melbourne. The instruments completed were firstly, the Specific Form of the ACS, secondly, a self-evaluation questionnaire about home-sickness, with questions relating to duration of boarding, previous boarding experiences, sister at school, and frequency of homesickness; and thirdly, the Dundee Relocation Inventory (DRI, Fisher, 1989).

Szczepanski, (1995), using the DRI, identified two factors which significantly predicted self-reported level of homesickness. She then investigated the association between scores on these two factors, general adaption to environment and missing home, and the strategies and styles assessed by the ACS. Coping strategies which significantly correlated with homesickness were Worry, Not Cope, Self-blame and Keep to Self. Thus the more homesick students are more likely to use non-productive strategies. Less successful adaptation to the new environment was associated statistically with greater use of Tension-reduction, and Keep tc Self, and a lesser use of Focus on the Positive. Further, less homesickness was associated with greater use of Solving the Problem, Focus on the Positive, Relaxation and Physical Recreation. In terms of the three styles assessed by the ACS, more usage of the effective coping style is associated with better integration into the new environment and less homesickness.

In the second study, Davies (1995) investigated the relationship between rigid beliefs about oneself and coping. Twenty-five Year 8 students (17 males and 8 females) aged 12 to 14 years, and attending an accelerated learning program in a government secondary school in Metropolitan Melbourne, completed the General and Specific Forms of the ACS, and the Idea Inventory (II, Kassinove, Cisci & Teigerman, 1997). The II is a 33-item instrument which assessess the degreee of endorsement of a number of irrational ideas about the self and others. The II scores ranged from 33 to 99 with lower scores indicating rigid beliefs and higher scores indicating more flexible beliefs. A cut off score of 66 was used to determine group allocation. Students with scores below 66 (n=13) were considered as characterised by rigid beliefs and students with scores above 66 (n=11) were allocated to a group containing students with non flexible beliefs. Students in Group 1 (Rigid Beliefs) used non-productive coping strategies to a significantly greater extent than students in Group 2. Group 1 students used Worry, Seek to Belong, Wishful Thinking, Self-blame and Keep to Self more than those in Group 2 for coping with General Concerns, and Worry, Wishful Thinking, Ignore the Problem and Self-blame to a greater extent for Coping with Specific Concerns.

Discussion

In summary, the above studies illustrate that significant relationships exist between a range of socially significant variables and the nature of coping. Generally, greater use of non-productive strategies, Keep to Self, Tension Reduction, Worry and Self-blame, are associated with greater dysfunction.

Conversely, lesser usage of these strategies are associated with greater academic performance and academic self-concept. In addition, greater use of some productive strategies such as Work Hard, Solving the Problem and Seeking Social Support are also associated with greater academic performance. These studies provide strong support for the construct validity of the ACS.

Decisions on whether to use individual strategies or styles is dependent on the type of analysis, the sample size, the research question of interest, and the power of the test. The ACS, comprising the 18 strategies and 3 styles has the potential for fine grained and broader analyses

When considering the studies reported above, it can be seen that some studies reported results for strategies and styles whereas others reported on either strategies or styles but not for both. One study adopts a methodology whereby the only strategies investigated are those that comprise a style which is a statistically significant predictor (Neill).

The data for strategies are of most interest as they demonstrate a need to retain this fine grained level of measurement or run the risk of 'washing out' potentially significant results. For example, Noto (1995) notes in her comparison of achievement and coping that when the effects of IQ and sex are controlled, achievement is significantly negatively associated with the strategy Invest in Close Friends but associated positively with the use of Social Support. Consequently, although these strategies may naturally occur in conjunction, to add their effects confounds the analysis. Similarly, McTaggart (1996) reports that 'students at risk' are more likely to attampt to Solve the Problem but less likely to Seek Professional Help. Consequently, adding these two conceptually associated strategies also introduces Type 11 errors by covering up real effects.

Finally, Cheshire (1996) reports that the learning disabled are significantly less likely to Focus on the Positive yet more likely to engage in Wishful Thinking. Therefore, any emotion-focused coping style which combines these strategies would likely have no significant associations with learning disability.

As a result of these possibilities it is particularly disturbing to note a methodology such as that utilised by Neill (1996), who only investigatges those strategies comprising styles which demonstrate statistically signifcant associations with outcomes. From the discussion above it is clear that such a methodology reduces the possibility of finding significant, yet opposing associations between each of two related strategies (which help comprise a particular style) with some dependent variables. The difficulty relating to fine-grained analysis is the lack of power for statistical tests when the sample size is small. This is because the ACS permits use of 18 dependent measures and subsequent multivariate analysis ideally requires somewhere between 5 and 20 cases per variable.

Conclusion

The ACS appears to be a useful instrument with adequate reliability and strong evidence of validity. However, the use of the Long Form should be encouraged for investigations of coping patterns of adolescents since combining strategies to form styles may lead to Type 11 errors wheras genuine differences between subsamples remain undetected. This is even the case when such strategies are naturally associated.

This last point is particularly important because the establishment of styles is generally based on an investigation of empirical relationships using procedures such as factor analysis. Such statistical analyses use as their criteria for the formation of styles, natural association between strategies, and do not consider associations between each of these respective strategies and outcome measures. Consequently the findings reported in this paper provide support for the argument put forward by Ebata and Moos (1994) and Stanton, Danoff-Burg, Cameron, and Ellis (1994) to retain consideration of fine-grained measures (such as the 18 strategies provided by the ACS) in addition to any styles which may be used by combining strategies.

Figure 1:

The conceptual areas of coping identified by the ACS

1) SEEKING SOCIAL SUPPORT is represented by items which indicate an inclination to share the problem with others and enlist support in its management (e.g., Talk to other people to help me sort it out).

2) FOCUS ON SOLVING THE PROBLEM is a problem-focused strategy which tackles the problem systematically by learning about it and takes into account different points of view or options (e.g., Work at solving the problem to the best of my ability).

3) WORK HARD AND ACHIEVE is a factor describing commitment, ambition and industry (e.g., Work hard).

4) WORRY is characterised by items which indicate a concern about the future in general terms or more specifically concern with happiness in the future (e.g., Worry about what is happening).

5) INVESTING IN CLOSE FRIENDS is about engaging in a particular intimate relationship (e.g., Spend more time with boy/girl friend).

6) SEEK TO BELONG indicates a caring and concern for one's relationship with others in general and more specifically concern with what others think (e.g., Improve my relationship with others).

7) WISHFUL THINKING characterised by items which are based on hope and anticipation of a positive outcome (e.g., Hope for the best).

8) SOCIAL ACTION is about letting others know what is of concern and enlisting support by writing petitions or organising an activity such as a meeting or a rally (e.g., Join with people who have the same concern).

9) TENSION REDUCTION is characterised by items which reflect an attempt to make oneself feel better by releasing tension (e.g., Make myself feel better by taking alcohol, cigarettes or other drugs).

10) NOT COPING consists of items which reflect the individual's inability to deal with the problem and the development of psychosomatic symptoms (e.g., I have no way of dealing with the situation).

11) IGNORE THE PROBLEM is characterised by items which reflect a conscious blocking out of the problem (e.g., Ignore the problem).

12) SELF BLAME indicates that an individual sees themselves as responsible for the concern or worry (e.g. Accept that I am responsible for the problem).

13) KEEP TO SELF is characterised by items which reflect the individual's withdrawal from others and wish to keep others from knowing about concerns (e.g., Keep my feelings to my self).

14) SEEK SPIRITUAL SUPPORT is characterised by items which reflect prayer and belief in the assistance of a spiritual leader or Lord (e.g., Pray for help and guidance so that everything will be all right).

15) FOCUS ON THE POSITIVE is represented by items which indicate a positive and cheerful outlook on the current situation. This includes seeing the 'bright side' of circumstances and seeing oneself as fortunate (e.g., Look on the bright side of things and think of all that is good).

16) SEEK PROFESSIONAL HELP denotes the use of a professional adviser, such as a teacher or counsellor (e.g., Discuss the problem with qualified people).

17) SEEK RELAXING DIVERSIONS is about relaxation in general rather than about sport. It is characterised by items which describe leisure activities such as reading and painting (e.g., Find a way to relax, for example, listen to music, read a book, play a musical instrument, watch TV).

18) PHYSICAL RECREATION is characterised by items which relate to playing sport and keeping fit (e.g., Keep fit and healthy).

Figure 2

Combination of Strategies in styles, based on the Short and Long Forms of the ACS

Short Form - Study 1	Long Form - Study 1 & 2
Productive Coping	
Focus on Solving the Problem	Focus on Solving the Problem
Focus on the Positive	Seek Social Support
Seek to Belong	Physical Recreation
Physical Recreation	Seek Relaxing Diversions
Seek Relaxing Diversions	Invest in Close Friends
Work Hard to Achieve	Seek to Belong
	Work Hard to Achieve
	Focus on the Positive
Reference to Others	
Seek Social Support	Seek Social Support
Seek Spiritual Support	Seek Professional Help
Seek Professional Help	Seek Spiritual Support
Social Action	Social Action
Non Productive Coping	
Worry	Worry
Invest in Close Friends	Seek to Belong
Wishful Thinking	Wishful Thinking
Seek to Belong	Not Coping
Ignore the Problem	Ignore the Problem
Tension Reduction	Tension Reduction
Keep to Self	Keep to Self
Not Coping	Self-Blame
Self-Blame	

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